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VALVE FOR CONTROLLING A FLUID

Field Of The Invention

The present invention is directed to a valve for controlling a fluid, in particular for controlling a gas.

5 Background Information

A valve is known from practice and is usable, for example, as a gas control valve in a fuel cell or also in a gas-powered engine.

10 The known valve includes a valve housing which accommodates an in particular electromagnetic actuator for an armature and is provided with a housing sleeve in which the armature is guided in an axially displaceable manner. The armature is used as a valve-closing element and cooperates with a valve seat situated on a seating plate so that a fluid flow through outflow orifices in the seating plate is controllable.

15 The problem in the case of the known gas valve is that the dry and gaseous medium to be controlled results in high wear demands which necessitate high-precision guiding of the armature. This cannot be reliably ensured by the previously used guiding of the armature in the housing sleeve since the housing sleeve may have the
20 problem of concentricity variations and diameter tolerances resulting from the deep-drawing processes used in the manufacture. The eccentricities and the diameter variations increase the tilting tendency of the armature and may in turn shorten the valve's service life.

25 Summary Of The Invention

The valve according to the present invention for controlling a fluid, in particular for controlling a gas, in which the armature is guided along an armature sleeve which is situated in the housing sleeve, has the advantage that the armature sleeve is manufacturable in a simple and cost-effective manner to have a uniform interior
30 diameter and thus good concentricity properties which have an advantageous effect on the valve's continuous operation properties. Due to the use of the armature sleeve, an additional guide sleeve is present which ensures optimized guide

SUBSTITUTE SPECIFICATION

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